Remarks

Claims 1-13 are pending in the application. Claims 1-3, 6, and 8-13 have been amended. Reconsideration and re-examination of the application for an advisory action is respectfully requested for the reasons set forth herein.

1. Claims 2, 6, 8-9, and 11-13 have been amended to correct grammatical errors. Claim 3 has been amended to claim that which the applicant regards as the invention. Approval of these amendments by the Examiner is respectfully requested.

2. The Examiner has rejected Claims 1-4 and 6-9 under 35 U.S.C. 102(e) as being anticipated by Kwak (U.S. Patent Number 6,111,347).

With regard to Claim 1, the Examiner stated that Kwak discloses a tension mask assembly that includes a mask frame 20c with a pair of frame members (long sides of frame 20c) disposed at opposite ends of the mask frame 20c. A plurality of mask strands 20f are disposed between and affixed to the frame members in such a way as to produce tension in the mask strands 20f. A third member 20d is disposed in a region of the mask strands 20f intermediate of the two frame members. The third member 20d is closer to a screen than one of the first pair of frame members. The Examiner, therefore, concluded that Kwak teaches all of the elements of Claim 1.

Claim 1 has been amended to state that said tension mask assembly comprises a third member for supporting said plurality of mask strands in a first intermediate region of said mask strands, between said pair of frame members, wherein said third member extends from an electron gun facing side toward said screen to contact said first intermediate region of said mask strands. Kwak teaches an aperture grill 20 with a mask 20b having a plurality of vertical slits 20a spaced apart from each other and a frame 20c for securing the mask 20b in a

taut state. As discussed in column 3 lines 10-16, a vibration suppressing unit is arranged on an upper portion of the mask 20b to suppress vibrations of slit formation elements 20f. The vibration suppressing unit includes damping wires 20d fixed on opposing sides of the frame 20c while being stretched over the mask 20b. As clearly shown in Figures 1 and 3 of Kwak, the vibration suppressing unit is arranged on the upper portion of the mask 20b on a side of the mask 20b that would be positioned to face a screen of a cathode ray tube. In the claimed invention the third member extends from an electron gun facing side toward the screen to contact the mask strands. Unlike Kwak where the vibration suppressing unit would be attached to the mask 20b after the mask 20b is attached to the frame 20c, the claimed arrangement of the third member enables the mask strands to contact the third member when the tension mask is laid across and brought into contact with the mask frame for attachment thereto. As a result, the third member is in frictional contact with the strands and isolates each strand from other strands during attachment of the tension mask to the first pair of frame members. Because Kwak does not teach the vibration damping unit as extending from the electron gun facing side toward the screen, Kwak does not teach all the elements of amended Claim 1. Removal of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Claims 2-4 and 6-9 depend from independent Claim 1. As previously discussed, Kwak does not teach all the elements of amended Claim 1. Because Kwak does not teach all the elements of Claim 1, Kwak does not teach all the elements of Claim 2-4 and 6-9. Removal of the rejection of Claims 2-4 and 6-9 under 35 U.S.C. 102(e) is respectfully requested.

3. The Examiner has rejected Claim 5 under 35 U.S.C. 103(a) as being unpatentable over Kwak (U.S. Patent Number 6,111,347) in view of Takagi (U.S. Patent Number 5,406,168).

With regard to Claim 5, the Examiner stated that Kwak discloses all of the claim limitation of Claim 5 as previously discussed but fails to exemplify that the mask strands 20f are connected to each other with an unetched strand material on each end. The Examiner further stated that Takagi teaches, in Figure 1a, mask strands connected to each other with an unetched strand material on each end in order to form a mask of a single piece of material. The Examiner, therefore, concluded that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to form the mask strands of Kwak with the unetched portion taught by Takagi in order to form the mask of a single piece of material.

Claim 5 depends for independent Claim 1. As previously discussed, Kwak does not teach all of the claim limitations of amended Claim 1. Because Kwak does not teach all of the claim limitations of amended Claim 1, Kwak does not teach all of the claim limitations of Claim 5, except the mask strands connected to each other with an unetched strand material on each end. As such, the combination of Kwak in view of Takagi does not teach or suggest all the elements of Claim 5. Removal of the rejection of Claim 5 under 35 U.S.C. 103(a) is respectfully requested.

4. The Examiner has rejected Claims 10-12 under 35 U.S.C. 103(a) as being unpatentable over Kwak (U.S. Patent Number 6,111,347) in view of Kuwana et al. (U.S. Patent Number 6,111,349).

With regard to Claim 10, the Examiner stated that Kwak discloses a method for forming a tension mask assembly that includes providing a tension mask with a plurality of mask strands 20f disposed vertically between two end regions (long sides of frame 20c). The etched mask strands 20f are placed in contact with a plurality of barrier ridge elements 20d. The etched mask strands 20f are not affixed to the plurality of barrier ridge elements 20d. The tension mask is affixed to a mask frame having vertical and horizontal elements, wherein the barrier ridge elements 20d are closer to a screen than one of the vertical and horizontal elements. Kwak fails to exemplify that the plurality of mask strands 20f should be formed by etching. The Examiner further stated that Kuwana et al. teaches forming a plurality of mask strands from a single thin sheet of metal by etching in column 2, lines 7-10. The Examiner, therefore, concluded that it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the etched mask strands of Kuwana et al. with the method of Kwak in order to form the mask strands from a single thin sheet of material.

Claim 10 has been amended to state that the method for forming a tension mask assembly comprises affixing the tension mask to a mask frame having vertical and horizontal elements, wherein the barrier ridge elements extend from an electron gun facing side of the tension mask to contact the tension mask. Kwak teaches an aperture grill 20 with a mask 20b having a plurality of vertical slits 20a spaced apart from each other and a frame 20c for securing the mask 20b in a taut state. As discussed in column 3, lines 10-16 of Kwak, a vibration suppressing unit is arranged on an upper portion of the mask 20b to suppress vibrations of slit formation elements 20f. As clearly shown in Figures 1 and 3 of Kwak, the vibration suppressing unit is arranged on the upper portion of the mask 20b on a side of the mask 20b that would be positioned to face a screen of a cathode ray tube. Kuwana et al. teaches an aperture grille 14 having a frame 76. As discussed in column 2, lines 35-67 of

Kuwana et al., a damper wire 64 is stretched across grille tapes 66 of the aperture grille 14 in a transverse direction such that the damper wire 64 contacts and clamps down on the grille tapes 66. As clearly shown in Figure 4 of Kuwana et al., the damper wire 64 is arranged on the upper portion of the aperture grille 14 on a side of the aperture grille 14 that would be positioned to face a screen of a cathode ray tube. Unlike Kwak or Kuwana et al., the claimed invention teaches affixing the tension mask to the mask frame wherein the barrier ridge elements extend from an electron gun facing side of the tension mask to contact the tension mask. This arrangement enables the tension mask to first contact the barrier ridge elements when the tension mask is laid across and brought into contact with the mask frame for attachment thereto. As a result, the barrier ridge elements are in frictional contact with the strands and isolate each strand from other strands during attachment of the tension mask to the mask frame. Because neither Kwak nor Kuwana et al. teach or suggest affixing the tension mask to the mask frame wherein barrier ridge elements contact an electron gun facing side of the mask, the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of amended Claim 10. Removal of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Claims 12-13 depend from independent Claim 10. As previously discussed, the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of Claim 10. Because the combination of Kwak in view of Kuwana et al. does not teach or suggest all of the elements of Claim 10, the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of Claims 11-12. Removal of the rejection of Claims 11-12 under 35 U.S.C. 103(a) is respectfully requested.

5. The Examiner has rejected Claim 13 under the 35 U.S.C. 103(a) as being unpatentable over Kwak (U.S. Patent Number 6,111,347) in view of Kuwana et al. (U.S. Patent Number 6,111,349) and further in view of Makita et al. (U.S. Patent Number 4,857,027).

With regard to Claim 13, the Examiner stated that Kwak in view of Kuwana et al. teaches all the elements of Claim 13 as previously discussed, except that the mask strands should be trimmed flush to an outer portion of the mask frame assembly after the mask strands are affixed to the mask frame. The Examiner further stated that Makita et al. teaches mask strands trimmed flush to an outer portion of a mask frame assembly after the mask strands are affixed to the mask frame in order to make it easier to handle and position the mask strands during production and to remove any unnecessary material which allows the final dimensions of the display bodies surrounding the screen to be smaller. The Examiner, therefore, concluded that it would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the method taught by Kwak in view of Kuwana et al. with the method of Makita et al. in order to minimize the size of the display body needed for a given size screen.

Claim 13 depends from independant Claim 10. As previously discussed, the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of amended Claim 10. Because the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of amended Claim 10, the combination of Kwak in view of Kuwana et al. does not teach or suggest all the elements of Claim 13, except that the mask strands should be trimmed flush to the outer portion of the mask frame assembly after the mask strands are fixed to the mask frame. As such, the combination of Kwak in view of Kuwana et al. and further in view of Makita et al. does not teach or suggest all the elements

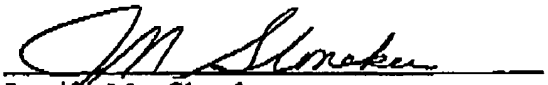
of Claim 13. Removal of the rejection of Claim 13 under 35 U.S.C. 103(a) is respectfully requested.

In view of the amendments and arguments presented herein, the application is considered to be in condition for allowance. Reconsideration and passage to issue is respectfully requested.

Please charge any additional fees associated with this application to Deposit Order Account No. 501581.

Respectfully submitted,

LaPeruta Jr. et al., Applicant(s)



Jennifer Mae Slonaker
Registration No. 50568
Attorney for Applicant(s)
Phone: 717.399-1535
Facsimile: 717.291.4660